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Arnold Schwarzenegger
Governor

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To: Underground Storage Tank (UST) Local Regulatory Agencies and Interested Parties

Matrix of Pipe Monitoring Applications

California Code of Regulations, Title 23, section 2631, subdivision (b) requires that the design and construction of tanks and piping be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. For nonmetallic piping, this requirement is typically met through obtaining listing from Underwriters Laboratories Inc. (UL) by successful completion of testing performed in accordance with UL 971: *Standard for Nonmetallic Underground Piping for Flammable Liquids*. For metallic piping this requirement can be met through successful completion of testing in accordance with UL 971A: *Outline of Investigation for Underground Metal Fuel Pipe*.

The UL 971 Standard and UL 971A Outline of Investigation include different test procedures depending on the intended use of the piping being tested. For example, piping intended for use with a closed interstitial space will be tested with higher pressure on the secondary containment than if the piping were intended for use with an open interstitial space. Other application-specific test procedures can be followed depending on which products will be stored in the system and which monitoring methods (vacuum, pressure, or liquid) will be used to monitor the piping.

Because there are numerous test procedures within the UL 971 Standard and UL 971A Outline of Investigation, it is important to verify that piping has been tested for the application in which it will be used. The attached "Matrix of Pipe Monitoring Applications" can be used to assist with identification of piping that complies with the independent testing requirements of California Code of Regulations, Title 23, section 2631(b).

The Matrix of Pipe Monitoring Applications is based on information provided by the pipe manufacturers and reviewed by the State Water Board's UST Program staff. These manufacturers have had a chance to review and comment on the matrix. It will

be updated periodically as we receive and review additional documentation from manufacturers. If you have questions on this memo or the attached matrix, please contact me at (916) 341-5870 (Ichaddock@waterboards.ca.gov).

Sincerely,

Original signed by

Laura Fisher-Chaddock, Chief
Underground Storage Tank Program
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Enclosures: Matrix of Pipe Monitoring Applications